a heterodyne detector connected to said prism.

5. A ring laser gyroscope with tilting mirrors as defined in claim **4** wherein a fourth of four tiltable mirror assemblies comprises:

a mirror arrangement attached to said frame;

a detector support structure connected to said mirror arrangement; and,

intensity.detectors connected to said detector support structure.

6. A ring laser gyroscope with tilting mirrors as defined in claim **5** wherein said mirror arrangement comprises:

moated mirror means;

a support structure connected to said moated mirror means;

a center post connected to said moated mirror means; and,

drive PZT means connected to said support structure and said center post for receiving said sinusoidal drive signal means.

7. A ring laser gyroscope with tilting mirrors as defined in claim **6** wherein said moated mirror means comprises:

a center section connected to said center post;

an outside section connected to said support structure;

thin moated webs separating said center section from said outside section and contacting said frame; and,

an optical coating located at said center section on a surface of said moated mirror means adjacent to said frame.

8. A ring laser gyroscope with tilting mirrors as defined in claim **7** wherein said drive PZT means comprises:

a first PZT stretching across a first half of said moated mirror means from a center of said center post to a first outside edge of said support structure; and,

a second PZT stretching across a second half of said moated mirror means from said center of said center post to a second outside edge of said support structure.

9. A ring laser gyroscope with tilting mirrors as defined in claim **8** wherein:

sinusoidal drive signal means causes length of said first PZT to increase while length of said second PZT decreases thereby applying force to said center post resulting in deformation of said thin moated webs and a tilting of said moated mirror means and said optical coating.

10. A ring laser gyroscope with tilting mirrors comprising:

a frame;

cathode and anode means mounted on said frame for producing counterpropagating waves traveling in opposite directions about an optical path within said frame;

a plurality of tiltable mirror assemblies mounted on said frame for defining said optical path;

path length control electronic means of maintaining a constant length of said optical path; and,

sinusoidal drive signal means connected to said plurality of tiltable mirror assemblies for sinusoidally tilting said tiltable mirror assemblies to sinusoidally rotate said optical path.

11. A ring laser gyroscope with tilting mirrors as defined in claim **10** wherein each of said plurality of tiltable mirror assemblies comprises a mirror arrangement attached to said frame comprising:

moated mirror means;

a support structure connected to said moated mirror means;

a center post connected to said moated mirror means; and,

drive PZT means connected to said support structure and said center post for receiving said sinusoidal drive signal means.

12. A ring laser gyroscope with tilting mirrors as defined in claim **11** wherein said moated mirror means comprises:

a center section connected to said center post;

an outside section connected to said support structure;

thin moated webs separating said center section from said outside section and contacting said frame; and,

an optical coating located at said center section on a surface of said moated mirror means adjacent to said frame.

13. A ring laser gyroscope with tilting mirrors as defined in claim **12** wherein said drive PZT means comprises:

a first PZT stretching across a first half of said moated mirror means from a center of said center post to a first outside edge of said support structure; and,

a second PZT stretching across a second half of said moated mirror means from said center of said center post to a second outside edge of said support structure.

14. A ring laser gyroscope with tilting mirrors as defined in claim **13** wherein:

sinusoidal drive signal means causes length of said first PZT to increase while length of said second PZT decreases thereby applying force to said center post resulting in deformation of said thin moated webs and a tilting of said moated mirror means and said optical coating.

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